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Linking People and Resources

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The Autism Priority Project is pleased to provide you with an article by Dr. Ruth Aspy, Dr. Barry Grossman, (co-developers of the Ziggurat Model), Shawn Henry and Dr. Brenda Smith Myles, (co-developers of the CAPS Model). Together the Ziggurat and CAPS models serve as comprehensive planning tools that may be used with students with Autism Spectrum Disorders.

Autism Spectrum Disorders: Developing Comprehensive Programs in Home, School, and Community

Ruth Aspy, Barry G. Grossman, Shawn A. Henry, Brenda Smith Myles

Individuals with autism spectrum disorders (ASD) are among the most challenging and rewarding to teach and support. Challenging because they present with unique underlying characteristics that demand a match between their characteristics and programming; rewarding in that individuals with ASD are extremely responsive to appropriate instruction that takes into account their complex needs.

While researchers have recognized both the complexity of the needs of individuals across the spectrum and of developing effective programs to address those needs, only recently have researchers and practitioners focused on developing comprehensive programming models. The purpose of this article is to briefly overview two such models. Recognized as the gold standard in comprehensive planning, the Ziggurat Model and the Comprehensive Autism Planning System (CAPS) provide a unique *process* and *framework* for designing and implementing comprehensive interventions for individuals of all ages with autism spectrum disorders (ASD). The models can be used alone or together. Each is designed to be completed by educational teams, including parents.

The Ziggurat Model

The Ziggurat Model is designed to address true needs or underlying deficits that result in social, emotional, and behavioral concerns. The model begins with an assessment of the individual's underlying needs and characteristics – a key component of the Ziggurat Model. To that end, the Ziggurat Model includes the Underlying Characteristics Checklist (UCC) that provides a snapshot of how ASD is expressed for an individual. Two forms of this instrument exist – the UCC-HF for individuals with Asperger Syndrome and high-functioning autism and the UCC-CL for individuals with a classic presentation of autism. UCC items address the following characteristics validated by research: (a) social, (b) restricted behaviors/interests, (c) communication, (d) sensory differences, (e) cognitive differences, (f) motor differences, (g) emotional vulnerability and (h) known medical and other biological factors. The Intervention Ziggurat is the centerpiece of the Ziggurat Model. As shown in Table 1, the Intervention Ziggurat contains five-levels derived from research on ASD.

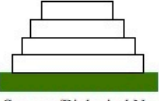
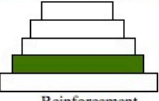
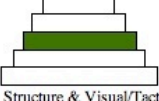


Table 1

Components of the Intervention Ziggurat

Components	Brief Overview
Sensory Differences and Biological Needs	The impact of each of the seven sensory systems on the individual with ASD is considered in this section of the Ziggurat. In addition, biological considerations, such as medication, allergies, and sleep needs, are factored into this model.
Reinforcement	Reinforcement, an essential component of student learning, is integrated into the Ziggurat framework. Student preferences, including special interests, support the acquisition and maintenance of skills.
Structure and Visual/Tactile Support	These supports are integral to creating a learning environment that is predictable and rich in language. This Ziggurat level includes addresses classroom layout, home base, visual schedules, choice boards, boundary markers, communication systems, learning style, modes of expressing and receiving language and academic/ pre-academic modifications.
Task Demands	An often overlooked instructional component, task demand interventions are designed to ensure that students are not required to participate in activities or to complete assignments that exceed their abilities. A reduction of demands and the addition of supports is required to facilitate success.
Skills to Teach	Finally, this Ziggurat area includes the skills, tasks, and/or behaviors on which the student requires direct instruction in order to experience success.

Starting with the foundation level—Sensory Differences and Biological Needs—each level represents an area that must be addressed in order for an intervention plan to be comprehensive. Interventions at each level are selected to address the student’s true needs (identified with the UCC) to ensure that “the autism” is addressed. Thus, interventions are meaningful – meeting underlying needs instead of masking them. Another strength of the model is the interaction of the five levels. Each level contributes to the effectiveness of the others. Figure 1 provides an example of the Ziggurat Worksheet.

ZIGGURAT WORKSHEET

BEHAVIOR/AREAS OF CONCERN	FOR SPECIFIC INTERVENTION PLAN Operationalized Behaviors	PRIORITIZED UCC ITEMS		CHECK ALL THAT APPLY		
		#	#	A	B	C
 Sensory/Biological Needs	Sensory/Biological Intervention: Underlying Characteristics Addressed:	# # # # #	# # # # #			
 Reinforcement	Reinforcement Intervention: Underlying Characteristics Addressed:					
 Structure & Visual/Tactile Supports	Structure & Visual/Tactile Supports Intervention: Underlying Characteristics Addressed:					
 Task Demands	Task Demand Intervention: Underlying Characteristics Addressed:					
 Skills to Teach	Skill Intervention: Underlying Characteristics Addressed:					

The Comprehensive Autism Planning System

The Comprehensive Autism Planning System (CAPS) is designed to provide an overview of a student's daily schedule by time and activity as well as the supports that are needed during each period. Following the development of the student's IEP, all educational professionals who work with the student develop the CAPS. The CAPS allows professionals and parents to answer the all-important question: What supports does the student need for each activity? The CAPS is a list of a student's daily tasks and activities, the times they occur, along with the delineation of supports needed for student success. In addition, the CAPS includes space for making notations about data collection and how skills are to be generalized to others settings. As shown in Figure 2, the CAPS consists of the following components developed from evidence-based best practices for students with ASD:

1. *Time.* This section indicates the clock time of each activity that the student engages in throughout the day.

2. *Activity.* Activities include *all* tasks and activities throughout the day in which the student requires support.
3. *Targeted Skills to Teach.* This may include IEP goals, state standards, and/or skills that lead to school success for a given student.
4. *Structure/Modifications.* Structure/modifications can consist of a wide variety of supports, including visual supports, peer networks and priming.
5. *Reinforcement.* Specific types of reinforcement are listed here.
6. *Sensory Strategies.* Sensory supports and strategies identified by an occupational therapist are listed in this CAPS area.
7. *Communication/Social Skills.* Goals or activities in this part of the CAPS may include social or communication skills or augmentative communication systems.
8. *Data Collection.* This space is for recording the type of data as well as the behavior to be documented during a specific activity.
9. *Generalization Plan.* This section directly addresses the challenges that individuals with ASD have using information and skills across settings.

Comprehensive Autism Planning System (CAPS)

Child/Student:

Time	Activity	Targeted Skills to Teach	Structure/ Modifications	Reinforcement	Sensory Strategies	Communication Social Skills	Data Collection	Generalization Plan

Henry, S. A., & Myles, B. S. (2007). *Integrating best practices throughout the student's daily schedule: The Comprehensive Autism Planning System (CAPS) for individuals with Asperger Syndrome, autism and related disabilities*. Shawnee Mission, KS: Autism Asperger Publishing Company.

The Ziggurat Model and the Comprehensive Autism Planning System

The Ziggurat Model and the CAPS are valuable resources for public school professionals who must remain in compliance with federal and state guidelines. Specifically, recent trends in special education law emphasize the use of scientifically based research approaches. In addition, there is a strong push for incorporating positive behavioral interventions and supports (PBIS). The Ziggurat Model and CAPS are consistent with these practices. First, evidenced-based interventions are incorporated in the Ziggurat and the CAPS model. Both also emphasizes a proactive, positive approach by requiring reinforcement and antecedent-based interventions. Finally, the Ziggurat Model and CAPS promote collaboration and communication among parents and professionals.

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